

Five Giralda Farms  
Madison, NJ 07940

and (Andy) Iyer, Ph.D.  
Attentor  
Law Department, Patent Section  
845 602-2189 tel  
iyera@wyeth.com

S.N.09/674368

#6

# Wyeth

May 2, 2002

Mr. Robert Sparr, Esq.  
U.S. Patent and Trademark Office  
Washington, D.C. 20231

**RECEIVED**

25 JUN 2002

Legal Unit  
International Division

Re: U.S. Application No. ACY-33377-00  
Serial No. 09/674368  
Assignee: American Cyanamid Company  
Inventors: Metcalf et al.  
Title: Vaccines Containing Recombinant Pilin Against Neisseria Gonorrhoeae



Dear Mr. Sparr:

I am writing this letter, pursuant to our telephone conversation of April 24, 2002, to request you to make a determination as to whether, based on the facts set out below, the Patent Office (the "Office") would be willing to withdraw the holding of abandonment in the above-identified application and provide the Applicants with an extension of time to respond to the "Notification of Defective Response."

**STATEMENT OF MATERIAL FACTS AND REASONS FOR GRANTING RELIEF**

The above-identified application (U.S. serial No. 09/674368) was filed as a "National Stage" application under 35 U.S.C. §371 on October 27, 2000, from a PCT application, International Application Number PCT/US99/09486, filed on April 29, 1999, and claims priority from U.S. Provisional Application No. 60/083,405 filed April 29, 1998.

The application as filed contained a sequence listing both in a computer readable form and as a paper copy, which was generated using PatentIn Version 2.0.

**BEST AVAILABLE COPY**

Wyeth Pharmaceuticals  
Wyeth Consumer Healthcare  
Fort Dodge Animal Health

On June 11, 2001, the Office mailed a "Notification to Comply with Requirements for Patent Application Containing Nucleotide Sequences and/or Amino Acid Disclosures" (the "Notification"), wherein the Office stated that the "computer readable form that had been filed with this application has been found to be damaged and/or unreadable" and requested the Applicants to submit a substitute computer readable sequence listing as required under 37 C.F.R. §§ 1.821 – 1.825. Specifically, in the Raw Sequence Listing Error Report (the "Report") mailed with the Notification the following errors were identified:

- (1) The number/text at the end of each line wrapped down to the next line; and
- (2) The file was not saved in ASC II (DOS) text as required by the sequence rules. (see Exhibit 1).

The report further cautioned the Applicants not to use the "copy to disk" function of the PatentIn Version 2.0 as a "bug" in the software would cause a corrupted file resulting in missing mandatory numeric identifiers and responses.

On December 12, 2001, the Applicants filed a response to the "Notification" with a petition for extension of time and fees. Along with the response, the Applicants submitted a substitute computer readable form and a paper copy of the sequence listing wherein the Applicants corrected the errors that were identified in the Report, together with a statement as required under 37 C.F.R. §§ 1.825. In generating the computer readable form of the sequence listing, wherein the errors identified in the Report were corrected, the Applicants used PatentIn Version 3.0 and the "Sequence Checker" function of Version 3.0.

On March 18, 2002, the Office mailed a "Notification of Defective Response" and set a "time limit of one month from the date of this Notification or the Notice of Missing Requirements, whichever is longer." The only error identified in the Raw Sequence Listing Error Summary Report that was sent with the Notification of Defective Response was an error caused by a "bug" in PatentIn Version 2.0, which caused sections <220> through <223> to be missing from amino acid sequences 2 and 4. (see Exhibit 2). The Report in paragraph 6

further stated that, “[n]ormally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence,” and that the only way to rectify this error is to “manually copy the relevant <220> <223> section to the subsequent amino acid sequence.”

The Applicants respectfully submit that the Applicants followed the suggestions of the Office in generating a substitute computer readable form of the sequence listing in responding to the Notification of July 11, 2001. The Applicants submit that due to software incompatibility between PatentIn Version 2.0 and the Version 3.0, the software failed to automatically generate sections <220> through <223> in the amino acid sequences 2 and 4. Furthermore, since the March 18, 2002 suggestion to manually copy the relevant sections <220> through <223> from the nucleic acid sequence 1 and 3 into the amino acid sequences 2 and 4 was not made in the “Raw Sequence Listing Error Report” mailed with the “Notification” of July 11, 2001, the Applicants were unaware that the missing mandatory sections needed to be corrected.

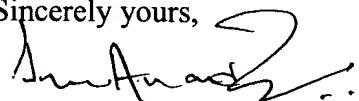
In view of the above, the Applicants respectfully request that the Office withdraw the holding of abandonment. The Applicants further request that the Applicants be granted an extension of time to file a response to the “Notification of Defective Response” together with a substitute computer readable form of the sequence listing.

## CONCLUSION

In view of the material facts set forth above, the Applicants respectfully request that the holding of abandonment be withdrawn, and the Applicants be granted relief to submit a substitute corrected computer readable form of the sequence listing.

Should you need to contact me or need any additional information, please do not hesitate to call me at #(845) 602-2189.

Sincerely yours,



Anand (Andy) P. Iyer, Ph.D.



Alan M. Gordon  
Reg. No. 30,637  
Attorney for Applicants

AIP/awp

**Wyeth**

S.N.09/674368

**EXHIBIT A**



I.A. FILING DATE

PRIORITY DATE

29 APR 99

DATE MAILED:

11 JUN 2001

**NOTIFICATION TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS  
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE  
DISCLOSURES**

Applicant has submitted papers under 35 U.S.C. 371 to enter the national stage in the United States of America. The items indicated below, however, are missing. The period within which to correct the deficiency noted below and avoid abandonment is set forth in the accompanying Notification.

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- The application fails to comply with the requirements of 37 CFR 1.821-1.825.
- This application does not contain, a "Sequence Listing" as a separate part of the disclosure on paper copy or compact disc, as required by 37 CFR 1.821(c).
- A copy of the "Sequence Listing" in computer readable format has not been submitted as required by 37 CFR 1.821(e).
- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- The paper copy or compact disc of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).
- Other: \_\_\_\_\_

**APPLICANT MUST PROVIDE:**

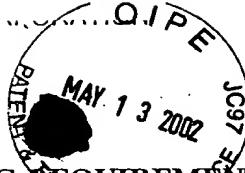
- An initial or substitute computer readable form (CRF) of the "Sequence Listing."
- An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).

**FOR QUESTIONS REGARDING COMPLIANCE WITH THESE REQUIREMENTS, PLEASE  
CALL:**

- (703) 308-4216, for Rules interpretation,
- (703) 308-4212, for CRF submission help,
- (703) 287-0200, for PatentIn software help.

Deborah D. Williams

Telephone: 703-305-3744



**NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

1. The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as  a Designated Office (37 CFR 1.494)  an Elected Office (37 CFR 1.495):

U.S. Basic National Fee.  Indication of Small Entity Status.  
 Copy of the international application.  Translation of the international application into English.  
 Oath or Declaration of inventors(s).  Translation of Article 19 amendments into English.  
 Copy of Article 19 amendments.  Other:  
 Priority Document.  
 The International Preliminary Examination Report in English and its Annexes, if any.  
 Translation of Annexes to the International Preliminary Examination Report into English.

2.  Applicant has requested early processing under 35 U.S.C. 371(f) but has not filed the following indicated items and/or the indicated items in paragraph 3 below. The Basic National Fee and the copy of the international application must be filed prior to 20 or 30 months from the priority date to avoid abandonment.

U.S. Basic National Fee.  Copy of the international application.

3. The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

a. Translation of the application into English. A processing fee will be required if submitted later than the appropriate 20 or 30 months from the priority date.  
 The current translation is defective for the reasons indicated on the attached Notice of Defective Translation.  
 b. Processing fee for providing the translation of the application and/or the Annexes later than the appropriate 20 or 30 months from the priority date (37 CFR 1.492(f)).  
 c. Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), properly identifying the application (preferably by the International application number and international filing date). A surcharge will be required if submitted later than the appropriate 20 or 30 months from the priority date.  
 The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) for the reasons indicated on the attached PCT/DO/EO/917.  
 d. Surcharge for providing the oath or declaration later than the appropriate 20 or 30 months from the priority date (37 CFR 1.492(e)).

4. Additional claim fees of \$ \_\_\_\_\_ as a  large entity  small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due (37 CFR 1.492(g)). See attached PTO-875.

5.  Applicant has not submitted the required sequence listing pursuant to 37 CFR 1.821-1.825. See attached PCT/DO/EO/920.

**ALL OF THE ITEMS SET FORTH IN 3(a)-3(d), 4 AND 5 ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 22 OR 32 MONTHS (where 37 CFR 1.495 applies) FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

6. If box 3a or 3c is checked, a translation of the Annexes MUST be submitted no later than the time period set above or the Annexes will be cancelled. A processing fee will be required if submitted later than 20 or 30 months from the priority date.

7.  The Article 19 amendments are cancelled since a translation was not provided by the appropriate 20 (37 CFR 1.494(d)) or 30 (37 CFR 1.495(d)) months from the priority date.

Applicant is reminded that any communication to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above. (37 CFR 1.5)

*A copy of this notice MUST be returned with this response.*

Enclosed:  PCT/DO/EO/917  
 PTO-875

Notice of Defective Translation  
 PCT/DO/EO/920

Deborah D. Williams

29 APR 92

DATE MAILED:

1 JUN 2001

MAY 13 2002

8-1101

sd 16/14/01

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

1. The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as  a Designated Office (37 CFR 1.494)  an Elected Office (37 CFR 1.495):

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 Copy of Article 19 amendments.  Other:  
 Priority Document.  
 The International Preliminary Examination Report in English and its Annexes, if any.  
 Translation of Annexes to the International Preliminary Examination Report into English.

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c. Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), properly identifying the application (preferably by the International application number and international filing date). A surcharge will be required if submitted later than the appropriate 20 or 30 months from the priority date.  
 The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) for the reasons indicated on the attached PCT/DO/EO/917.  
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*A copy of this notice MUST be returned with this response.*

Enclosed:  PCT/DO/EO/917  Notice of Defective Translation  
 PTO-875  PCT/DO/EO/920

RECEIVED

JUN 13 2001

Deborah D. Williams

Telephone: 703-305-3744

ANNEITE CROMER



BIOTECHNOLOGY  
SYSTEMS  
BRANCH

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/674,368

Source: PCT/09

Date Processed by STIC: 3/09/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY.

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW.

### **Checker Version 3.0**

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:



## Raw Sequence Listing Error Summary

### ERROR DETECTED

### SUGGESTED

### CORRECTION

SERIAL NUMBER: 09/674,368

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1  Wrapped Nucleic  
The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".

2  Wrapped Aminos  
The amino acid number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".

3  Incorrect Line Length  
The rules require that a line not exceed 72 characters in length. This includes spaces.

4  Misaligned Amino Acid Numbering  
The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.

5  Non-ASCII  
This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.

6  Variable Length  
Sequence(s) \_\_\_\_\_ contain n's or Xaa's which represent more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.

7  PatentIn ver. 2.0 "bug"  
A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

8  Skipped Sequences (OLD RULES)  
Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X:  
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
This sequence is intentionally skipped  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).

9  Skipped Sequences (NEW RULES)  
Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence:  
<210> sequence id number  
<400> sequence id number  
000

10  Use of n's or Xaa's (NEW RULES)  
Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

11  Use of <213>Organism (NEW RULES)  
Sequence(s) \_\_\_\_\_ are missing this mandatory field or its response.

12  Use of <220>Feature (NEW RULES)  
Sequence(s) \_\_\_\_\_ are missing the <220>Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown".  
Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rul

13  PatentIn ver. 2.0 "bug"  
Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk.



Page 1

PC

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368

DATE: 03/07/2001  
TIME: 11:37:48

Does Not Comply  
Corrected Diskette Needed

Input Set: A:\PTO.txt  
Output Set: N:\CRF3\03072001\I674368.raw

5 <110> APPLICANT: American Cyanamid Company  
7 <120> TITLE OF INVENTION: Vaccines Containing Recombinant Pilin Against Neisseria  
9 Gonorrhoeae or Neisseria Meningitidis  
11 <130> FILE REFERENCE: 33377-00/PCT  
13 <140> CURRENT APPLICATION NUMBER: US/09/674,368  
14 <141> CURRENT FILING DATE: 2000-10-27  
16 <160> NUMBER OF SEQ ID NOS: 24  
18 <170> SOFTWARE: PatentIn Ver. 2.0

see item 5 on Error  
summary sheet

#### ERRORED SEQUENCES

299 <210> SEQ ID NO: 13  
300 <211> LENGTH: 31  
301 <212> TYPE: DNA  
303 <213> ORGANISM: Neisseria Meningitidis Class I  
305 <400> SEQUENCE: 13  
E--> 306 ccggccgcgtc tctcacggcg aatggcccg c 31  
307 31  
396 <210> SEQ ID NO: 24  
397 <211> LENGTH: 22  
398 <212> TYPE: PRT  
399 <213> ORGANISM: Neisseria gonorrhoeae  
404 <400> SEQUENCE: 24  
405 Glu Ala Ile Leu Leu Ala Glu Gly Glu Lys Ser Ala Val Thr Glu Tyr  
406 1 5 10 15  
408 Tyr Leu Asn His Gly Lys  
410 20  
E--> 441 1  
E--> 443 8  
445 ACY-33377-00

move up - format error  
(see item 1 on  
Error summary  
sheet)

delete at end of file

see following pages for more errors

VERIFICATION SUMMARY DATE: 03/07/2001  
PATENT APPLICATION: US/09/674,368 TIME: 11:37:50

Input Set : A:\PTO.txt  
Output Set: N:\CRF3\03072001\I674368.raw

L:13 M:270 C: Current Application Number differs, Replaced Application Number  
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:60 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:64 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:68 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:72 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:76 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:80 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:87 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:87 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:194 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:194 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:306 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:31 SEQ:13  
L:441 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:24  
M:332 Repeated in SeqNo=24

4  
RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368

DATE: 03/14/2001  
TIME: 12:10:34

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\03142001\I674368.raw

142	1	5	10	15													
144	atc	gcc	atc	gtc	ggt	atc	ttg	gca	gcc	gtc	gcc	ctg	ccc	gca	tac	caa	96
145	Ile	Ala	Ile	Val	Gly	Ile	Leu	Ala	Ala	Val	Ala	Leu	Pro	Ala	Tyr	Gln	
146																	144
148	gac	tac	acc	gct	cgc	gcc	caa	atg	tcc	gaa	gcc	ctg	act	ttg	gca	gaa	
149	Asp	Tyr	Thr	Ala	Arg	Ala	Gln	Met	Ser	Glu	Ala	Leu	Thr	Leu	Ala	Glu	
150																	192
152	ggt	caa	aaa	tcc	gca	gtg	atc	gag	tat	tat	tcc	gac	aac	ggc	aca	ttc	
153	Gly	Gln	Lys	Ser	Ala	Val	Ile	Glu	Tyr	Tyr	Ser	Asp	Asn	Gly	Thr	Phe	
154																	
																	240
156	ccg	aac	agc	aat	act	tcc	gca	ggt	att	gct	gcc	tct	aat	gag	att	aaa	
157	Pro	Asn	Ser	Asn	Thr	Ser	Ala	Gly	Ile	Ala	Ala	Ser	Asn	Glu	Ile	Lys	
158																	288
160	ggt	aag	tat	gtg	gca	tcg	gtt	aag	gtt	gaa	ggt	aat	gcc	tct	gtt	gct	
161	Gly	Lys	Tyr	Val	Ala	Ser	Val	Lys	Val	Glu	Gly	Asn	Ala	Ser	Val	Ala	
162																	336
164	tct	att	acc	gct	acc	atg	aac	tct	agt	aat	gtg	aat	aag	gac	atc	aaa	
165	Ser	Ile	Thr	Ala	Thr	Met	Asn	Ser	Ser	Asn	Val	Asn	Lys	Asp	Ile	Lys	
166																	384
169	ggt	aaa	acc	ttg	gta	ctc	gtc	ggc	aaa	caa	aac	tcc	ggt	tcg	gta	aaa	
170	Gly	Lys	Thr	Leu	Val	Leu	Val	Gly	Lys	Gln	Asn	Ser	Gly	Ser	Val	Lys	
171																	432
173	tgg	tcc	tgc	gga	cag	ccg	gtt	acg	cgc	gac	aac	gcc	gac	aac	gac	gac	
174	Trp	Phe	Cys	Gly	Gln	Pro	Val	Thr	Arg	Asp	Asn	Ala	Asp	Asn	Asp	Asp	
175																	480
177	gtc	aaa	gac	gcc	ggc	aac	aac	ggc	atc	gaa	acc	aag	cac	ctg	ccg	tca	
178	Val	Lys	Asp	Ala	Gly	Asn	Asn	Gly	Ile	Glu	Thr	Lys	His	Leu	Pro	Ser	
179																	510
181	acc	tgc	cgc	gat	acg	tca	tct	gat	gcc	aaa							
182	Thr	Cys	Arg	Asp	Thr	Ser	Ser	Asp	Ala	Lys							
183																	
186	<210>	SEQ ID NO:	4														
187	<211>	LENGTH:	170														
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W-->	191	<220>	FEATURE:														→ same env - see item 13
W-->	191	<223>	OTHER INFORMATION:														on Env
191	<400>	SEQUENCE:	4														Summary Sheet
192	Met	Glu	Ala	Ile	Gln	Lys	Gly	Phe	Thr	Leu	Ile	Glu	Leu	Met	Ile	Val	
193																	15
195	Ile	Ala	Ile	Val	Gly	Ile	Leu	Ala	Ala	Val	Ala	Leu	Pro	Ala	Tyr	Gln	
196																	30
198	Asp	Tyr	Thr	Ala	Arg	Ala	Gln	Met	Ser	Glu	Ala	Leu	Thr	Leu	Ala	Glu	
199																	45
201	Gly	Gln	Lys	Ser	Ala	Val	Ile	Glu	Tyr	Tyr	Ser	Asp	Asn	Gly	Thr	Phe	
202																	80
204	Pro	Asn	Ser	Asn	Thr	Ser	Ala	Gly	Ile	Ala	Ala	Ser	Asn	Glu	Ile	Lys	
205																	
207	Gly	Lys	Tyr	Val	Ala	Ser	Val	Lys	Val	Glu	Gly	Asn	Ala	Ser	Val	Ala	

W-->

191 <220> FEATURE:  
191 <223> OTHER INFORMATION:  
191 <400> SEQUENCE: 4

192	Met	Glu	Ala	Ile	Gln	Lys	Gly	Phe	Thr	Leu	Ile	Glu	Leu	Met	Ile	Val	
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196																	30
198	Asp	Tyr	Thr	Ala	Arg	Ala	Gln	Met	Ser	Glu	Ala	Leu	Thr	Leu	Ala	Glu	
199																	45
201	Gly	Gln	Lys	Ser	Ala	Val	Ile	Glu	Tyr	Tyr	Ser	Asp	Asn	Gly	Thr	Phe	
202																	
204	Pro	Asn	Ser	Asn	Thr	Ser	Ala	Gly	Ile	Ala	Ala	Ser	Asn	Glu	Ile	Lys	
205																	
207	Gly	Lys	Tyr	Val	Ala	Ser	Val	Lys	Val	Glu	Gly	Asn	Ala	Ser	Val	Ala	

3

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,368

DATE: 03/14/2001

TIME: 12:10:34

Input Set : A:\Pto.amc

Output Set: N:\CRF3\03142001\I674368.raw

71 gcc aag acc gcc gac aac atc aac acc aag cac ctg ccg tca acc tgc 480  
72 Ala Lys Thr Ala Asp Asn Ile Asn Thr Lys His Leu Pro Ser Thr Cys  
W--> 73 145 150 155 160  
75 cgc gac gca agt gat gcc agc taa 504  
76 Arg Asp Ala Ser Asp Ala Ser  
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80 <211> LENGTH: 167  
81 <212> TYPE: PRT  
82 <213> ORGANISM: Artificial Sequence  
W--> 84 <220> FEATURE: *see item 13 on Error*  
W--> 84 <223> OTHER INFORMATION:  
84 <400> SEQUENCE: 2  
85 Met Asp Thr Leu Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val  
86 1 5 10 15  
88 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
89 20 25 30  
92 Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu  
93 35 40 45  
96 Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp  
97 50 55 60  
100 Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Ser Ser Ser Thr Ile Lys  
101 65 70 75 80  
104 Gly Lys Tyr Val Lys Glu Val Val Thr Val Ala Asn Gly Val Ile Thr Ala  
105 85 90 95  
108 Thr Met Leu Ser Ser Gly Val Asn Lys Glu Ile Gln Gly Lys Lys Leu  
109 100 105 110  
112 Ser Leu Trp Ala Lys Arg Gln Asp Gly Ser Val Lys Trp Phe Cys Gly  
113 115 120 125  
115 Gln Pro Val Thr Arg Thr Asp Ala Lys Ala Asp Thr Val Ala Ala Ala  
116 130 135 140  
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119 145 150 155 160  
121 Arg Asp Ala Ser Asp Ala Ser  
122 165  
125 <210> SEQ ID NO: 3  
126 <211> LENGTH: 510  
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128 <213> ORGANISM: Artificial Sequence  
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131 <223> OTHER INFORMATION: Description of Artificial Sequence: Chimeric of  
132 Neisseria Meningitidis Class II and Neisseria  
133 Gonorrhoeae  
135 <220> FEATURE:  
136 <221> NAME/KEY: CDS  
137 <222> LOCATION: (1)..(510)  
139 <400> SEQUENCE: 3  
140 atg gaa gca atc caa aaa ggt ttc acc ctg atc gag ctg atg atc gtc 48  
141 Met Glu Ala Ile Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val

Summary Sheet

**Wyeth**

S.N.09/674368

**EXHIBIT B**



## UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box PCT  
 United States Patent and Trademark Office  
 Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/674,368	Thomas N III Metcalf	33377-00

INTERNATIONAL APPLICATION NO.

PCT/US99/09486

IA. FILING DATE

04/29/1999

PRIORITY DATE

Alan M Gordon  
 Patent Law Department 2B  
 American Home Products Corporation  
 One Campus Drive  
 Parsippany, NJ 07054



CONFIRMATION NO. 6981  
 371 FORMALITIES LETTER



\*OC000000007646414\*

Date Mailed: 03/18/2002

## NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fee
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Oath or Declaration

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

**Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).**

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
  - The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- **APPLICANT MUST PROVIDE:**
  - An initial or substitute computer readable form (CRF) of the "Sequence Listing."

• For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice MUST be returned with the response.*

DEBORAH D WILLIAMS

Telephone: (703) 305-3744

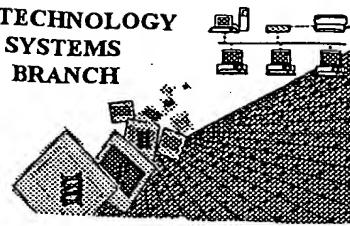
PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/674,368	PCT/US99/09486	33377-00

FORM PCT/DO/EO/916 (371 Formalities Notice)



BIOTECHNOLOGY  
SYSTEMS  
BRANCH



D6  
SOED  
1231-2001  
Mail

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/694,368 A  
Source: PCP/09  
Date Processed by STIC: 2/6/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.  
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.  
PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)  
PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.  
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.  
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or

U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,  
2011 South Clark Place, Arlington, VA 22202

4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,  
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

**Raw Sequence Listing Error Summary**

**ERROR DETECTED**      **SUGGESTED CORRECTION**      **SERIAL NUMBER:** 09/674,368A

**TTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE**

**Wrapped Nucleic  
Wrapped Aminos**      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

**Invalid Line Length**      The rules require that a line not exceed 72 characters in length. This includes white spaces.

**Misaligned Amino  
Numbering**      The numbering under each 3<sup>rd</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

**Non-ASCII**      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

**Variable Length**      Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

**PatentIn 2.0  
"bug"**      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) 24. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

**Skipped Sequences  
(OLD RULES)**      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
(ii) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

**Skipped Sequences  
(NEW RULES)**      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000

**Use of n's or Xaa's  
(NEW RULES)**      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.

**Invalid <213>  
Response**      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence.

**Use of <220>**      Sequence(s) \_\_\_\_\_ missing the <220> "Feature" and associated numeric identifiers and responses.  
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

**PatentIn 2.0  
"bug"**      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

**Misuse of n**      n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



13 2002  
USPTO  
PATENT & TRADEMARK OFFICE  
JC97



PCT09

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368A

DATE: 02/06/2002  
TIME: 14:15:57

Input Set : A:\33377PCT.APP.txt  
Output Set: N:\CRF3\02062002\I674368A.raw

Does Not Comply  
Corrected Diskette Needed

13  
JUL 13

5 <110> APPLICANT: American Cyanamid Company  
7 <120> TITLE OF INVENTION: Vaccines Containing Recombinant Pilin Against Neisseria  
9 Gonorrhoeae or Neisseria Meningitidis  
11 <130> FILE REFERENCE: 33377-00/PCT  
13 <140> CURRENT APPLICATION NUMBER: US/09/674,368A  
14 <141> CURRENT FILING DATE: 2001-12-11  
16 <160> NUMBER OF SEQ ID NOS: 24  
18 <170> SOFTWARE: PatentIn Ver. 2.0  
20 <210> SEQ ID NO: 1  
21 <211> LENGTH: 504  
22 <212> TYPE: DNA  
23 <213> ORGANISM: Artificial Sequence  
25 <220> FEATURE:  
26 <223> OTHER INFORMATION: Description of Artificial Sequence: Chimeric of  
27 Neisseria Meningitidis Class I and Neisseria  
28 Gonorrhoeae  
30 <220> FEATURE:  
31 <221> NAME/KEY: CDS  
32 <222> LOCATION: (1)...(501)  
34 <400> SEQUENCE: 1  
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38 1 5 10 15  
40 atc gcc atc gtc ggc att ttg gcg gca gtc gcc ctt ccc gcc tac caa 96  
41 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
42 20 25 30  
44 gac tac acc gcc cgc gcg caa gtt tcc gaa gcc atc ctt ttg gcc gaa 144  
45 Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu  
46 35 40 45  
48 ggt caa aaa tca gcc gtt acc gag tat tac ctg aat cac ggc gaa tgg 192  
49 Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp  
50 50 55 60  
52 ccc ggc aac aac act tct gcc ggc gtg gca tct tct tca aca atc aaa 240  
53 Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Ser Ser Ser Thr Ile Lys  
54 65 70 75 80  
58 ggc aaa tat gtt aag gaa gtt aca gtc gca aac ggc gtc att acc gcc 288  
59 Gly Lys Tyr Val Lys Glu Val Ile Val Ala Asn Gly Val Ile Ile Ala  
60 85 85 90 90 95 95 *← Jef numbering*  
62 aca atg ctt tca agc ggc gta aac aaa gaa atc caa ggc aaa aaa ctc 336  
63 Thr Met Leu Ser Ser Gly Val Asn Lys Glu Ile Gln Gly Lys Lys Leu  
64 100 105 110  
66 tcc ctg tgg gcc aag cgt caa gac ggt tcg gta aaa tgg ttc tgc gga 384  
67 Ser Leu Trp Ala Lys Arg Gln Asp Gly Ser Val Lys Trp Phe Cys Gly

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368A

DATE: 02/06/2002  
TIME: 14:15:57

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Output Set: N:\CRF3\02062002\I674368A.raw

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 70 cag ccg gtt acg cgc acc gac gcc aaa gcc gac acc gtc gcc gcc gcc 432  
 71 Gln Pro Val Thr Arg Thr Asp Ala Lys Ala Asp Thr Val Ala Ala Ala  
 72 130 135 140  
 74 gcc aag acc gcc gac aac atc aac acc aag cac ctg ccg tca acc tgc 480  
 75 Ala Lys Thr Ala Asp Asn Ile Asn Thr Lys His Leu Pro Ser Thr Cys  
 -> 76 145 150 155 160  
 78 cgc gac gca agt gat gcc agc taa 504  
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 -> 80 165  
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 84 <212> TYPE: PRT  
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 -> 87 <223> OTHER INFORMATION:  
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 see item 6 on Error Summary Sheet  
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 91 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
 92 20 25 30  
 95 Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu  
 96 35 40 45  
 99 Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp  
 100 50 55 60  
 103 Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Ser Ser Ser Thr Ile Lys  
 104 65 70 75 80  
 107 Gly Lys Tyr Val Lys Glu Val Thr Val Ala Asn Gly Val Ile Thr Ala  
 108 85 90 95  
 111 Thr Met Leu Ser Ser Gly Val Asn Lys Glu Ile Gln Gly Lys Lys Leu  
 112 100 105 110  
 115 Ser Leu Trp Ala Lys Arg Gln Asp Gly Ser Val Lys Trp Phe Cys Gly  
 116 115 120 125  
 118 Gln Pro Val Thr Arg Thr Asp Ala Lys Ala Asp Thr Val Ala Ala Ala  
 119 130 135 140  
 121 Ala Lys Thr Ala Asp Asn Ile Asn Thr Lys His Leu Pro Ser Thr Cys  
 122 145 150 155 160  
 124 Arg Asp Ala Ser Asp Ala Ser  
 125 165  
 128 <210> SEQ ID NO: 3  
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 131 <213> ORGANISM: Artificial Sequence  
 133 <220> FEATURE:  
 134 <223> OTHER INFORMATION: Description of Artificial Sequence: Chimeric of  
 135 ~~Neisseria meningitidis~~ Class II and ~~Neisseria~~  
 136 Gonorrhoeae  
 138 <220> FEATURE:  
 139 <221> NAME/KEY: CDS

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368A

DATE: 02/06/2002  
TIME: 14:15:57

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Output Set: N:\CRF3\02062002\I674368A.raw

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 145 1 5 10 15  
 147 atc gcc atc gtc ggt atc ttg gca gcc gtc gcc ctg ccc gca tac caa 96  
 148 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
 149 20 25 30  
 151 gac tac acc gcg cgc gcc caa atg tcc gaa gcc ctg act ttg gca gaa 144  
 152 Asp Tyr Thr Ala Arg Ala Gln Met Ser Glu Ala Leu Thr Leu Ala Glu  
 153 35 40 45  
 155 ggt caa aaa tcc gca gtg atc gag tat tat tcc gac aac ggc aca ttc 192  
 156 Gly Gln Lys Ser Ala Val Ile Glu Tyr Tyr Ser Asp Asn Gly Thr Phe  
 157 50 55 60  
 159 ccg aac agc aat act tcc gca ggt att gct gcc tct aac gag att aaa 240  
 160 Pro Asn Ser Asn Thr Ser Ala Gly Ile Ala Ala Ser Asn Glu Ile Lys  
 161 65 70 75 80  
 163 ggt aag tat gtg gca tcg gtt aag gtt gaa ggt aat gcc tct gtt gct 288  
 164 Gly Lys Tyr Val Ala Ser Val Lys Val Glu Gly Asn Ala Ser Val Ala  
 165 85 90 95  
 167 tct att acc gct acc atg aac tct agt aat gtg aat aag gac atc aaa 336  
 168 Ser Ile Thr Ala Thr Met Asn Ser Ser Asn Val Asn Lys Asp Ile Lys  
 169 100 105 110  
 172 ggt aaa acc ttg gta ctc gtc ggc aaa caa aac tcc ggt tcg gta aaa 384  
 173 Gly Lys Thr Leu Val Leu Val Gly Lys Gln Asn Ser Gly Ser Val Lys  
 174 115 120 125  
 176 tgg ttc tgc gga cag ccg gtt acg cgc gac aac gcc gac aac gac gac 432  
 177 Trp Phe Cys Gly Gln Pro Val Thr Arg Asp Asn Ala Asp Asn Asp Asp  
 178 130 135 140  
 180 gtc aaa gac gcc ggc aac aac ggc atc gaa acc aag cac ctg ccg tca 480  
 181 Val Lys Asp Ala Gly Asn Asn Gly Ile Glu Thr Lys His Leu Pro Ser  
 182 145 150 155 160  
 184 acc tgc cgc gat acg tca tct gat gcc aaa 510  
 185 Thr Cys Arg Asp Thr Ser Ser Asp Ala Lys  
 186 165 170  
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 190 <211> LENGTH: 170  
 191 <212> TYPE: PRT  
 192 <213> ORGANISM: Artificial Sequence  
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 196 1 5 10 15  
 198 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln  
 199 20 25 30  
 201 Asp Tyr Thr Ala Arg Ala Gln Met Ser Glu Ala Leu Thr Leu Ala Glu  
 202 35 40 45  
 204 Gly Gln Lys Ser Ala Val Ile Glu Tyr Tyr Ser Asp Asn Gly Thr Phe

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/674,368A

DATE: 02/06/2002  
TIME: 14:15:57

Input Set : A:\33377PCT.APP.txt  
Output Set: N:\CRF3\02062002\I674368A.raw

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207	Pro Asn Ser Asn Thr Ser Ala Gly Ile Ala Ala Ser Asn Glu Ile Lys			
208	65	70	75	80
210	Gly Lys Tyr Val Ala Ser Val Lys Val Glu Gly Asn Ala Ser Val Ala			
211	85	90	95	
213	Ser Ile Thr Ala Thr Met Asn Ser Ser Asn Val Asn Lys Asp Ile Lys			
214	100	105	110	
216	Gly Lys Thr Leu Val Leu Val Gly Lys Gln Asn Ser Gly Ser Val Lys			
217	115	120	125	
219	Trp Phe Cys Gly Gln Pro Val Thr Arg Asp Asn Ala Asp Asn Asp Asp			
220	130	135	140	
222	Val Lys Asp Ala Gly Asn Asn Gly Ile Glu Thr Lys His Leu Pro Ser			
223	145	150	155	160
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226	165	170		
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326 <212> TYPE: DNA  
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VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/674,368A

DATE: 02/06/2002  
TIME: 14:15:59

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Output Set: N:\CRF3\02062002\I674368A.raw

13 M:270 C: Current Application Number differs, Replaced Application Number  
14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
60 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
64 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
68 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
72 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
76 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
80 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
87 M:258 W: Mandatory Feature missing, <220> FEATURE:  
87 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
194 M:258 W: Mandatory Feature missing, <220> FEATURE:  
194 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:

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